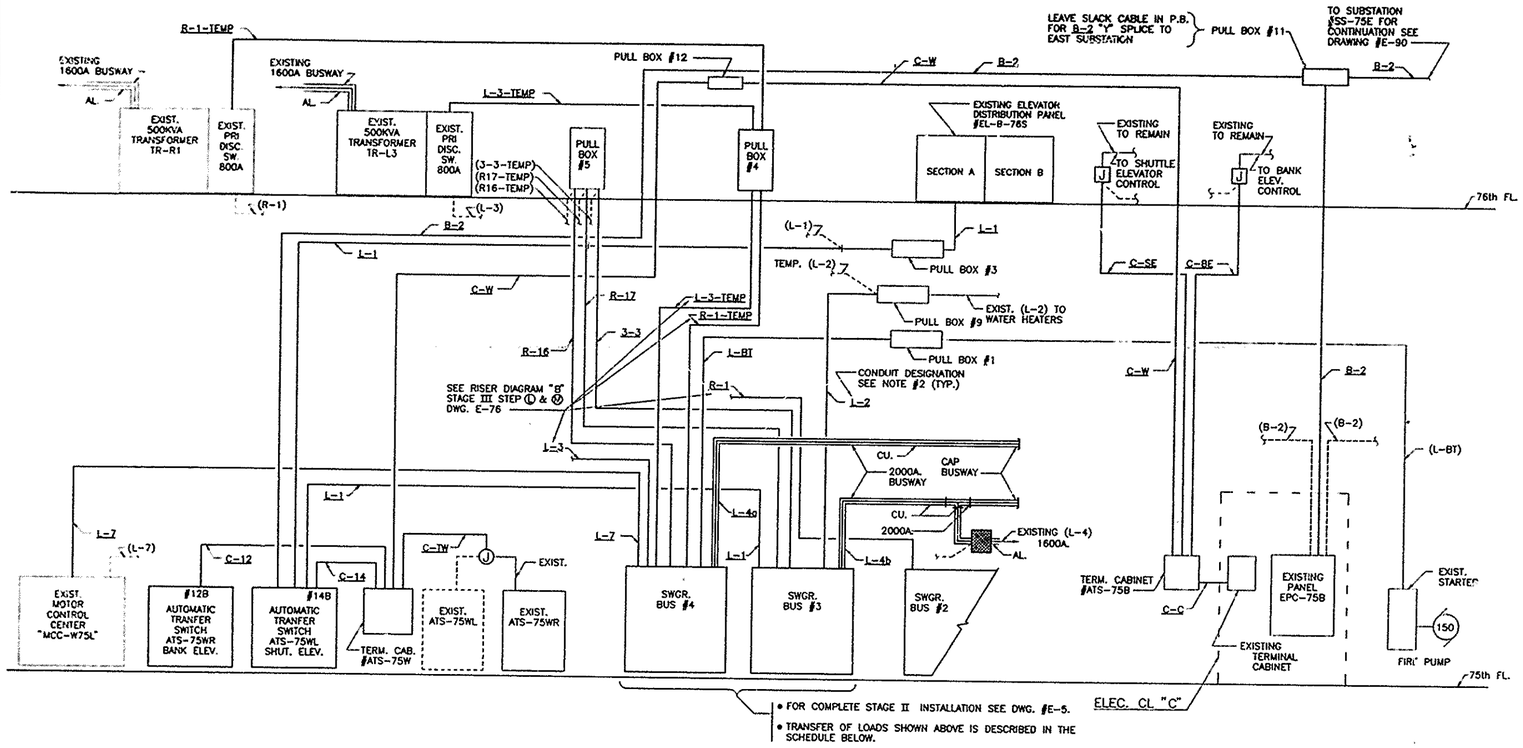

• FOR COMPLETE STAGE II INSTALLATION SEE DWG. #E-5.
• TRANSFER OF LOADS SHOWN ABOVE IS DESCRIBED IN THE SCHEDULE BELOW.

RISER DIAGRAM

STAGE II STEP (I) – DWG #E-5

(SEE NOTE #4)

SCHEDULE STAGE II STEP (I) – TRANSFER LOADS TO BUS #3 & 4.

LOAD OUTAGES – SEE NOTE #5
* = CATEGORY "A" OR "B"
** = CATEGORY "C"

CONDUIT DESIGNATION — SHUTTLE ELEVATORS —

CONTROL FOR SHUTTLE & BANK ELEVATORS
CDTS # C-12, C-14, C-W, C-TW, C-SE, C-BE, & C-C
a. – INSTALL C CDT & WIRE FROM SHUTTLE & BANK ELEVATOR TRANSFER SWITCHES. AS SHOWN ABOVE
b. – CONNECT ALL CONTROL WIRE AS SHOWN ON DWG #E-99 LEGEND – (CB).

L-1 NORMAL FEEDER TO SHUTTLE ELEV.
a. – INSTALL L-1 CDT & WIRE FROM SWGR. BUS #3 TO TRANSFER SWITCH
b. – INSTALL CDT. L-1 FROM TRANSFER SWITCH TO POINT OF CONNECTION TO EXIST. CDT.
** SEE NOTE #3 – c. – REMOVE EXIST. FDR (L-1) FROM PNL EL-B-76S BACK TO EXIST. SWGR.
** SEE NOTE #3 – d. – CUT EXIST. CDT. (L-1) & REMOVE TO EXIST. SWGR.
** SEE NOTE #3 – e. – MAKE CONNECTION TO EXIST. CDT. AND INSTALL FEEDER FROM TRANSFER SWITCH TO PANEL EL-B-76S VIA P.B. #3 (ENERGIZE)

B-2 EMERG. FEEDER TO SHUTTLE ELEV.
a. – INSTALL B-2 CDT & WIRE FROM TRANSFER SWITCH TO EXIST. PANEL #EPC-75B, VIA P.B.11.
* b. – DISCONNECT EXIST. & CONNECT FDR (B-2) AT PANEL (ENERGIZE) – NOTE: B-2 RUN TO EXIST. SUBSTATION SS-75E TO REMAIN.
c. – DISCONNECT EXIST. & CONNECT CONTROL WIRING DESIGNATED (4B) ON DWG. #E-99
d. – REMOVE EXIST. FDR (B-2) BACK TO EXIST. ELEVATOR TRANSFER SWITCH.

L-BT FIRE PUMP
a. – INSTALL L-BT CDT & WIRE FROM SWGR. BUS #4 TO P.B. #1
* b. – CUT EXIST. FDR. L-BT IN P.B. #1 & REMOVE BACK TO EXIST. SWGR.
c. – SPLICE TO EXIST. FDR. L-BT IN P.B. #1 (ENERGIZE)

L-2 HOT WATER HEATERS
a. – INSTALL L-2 CDT & WIRE FROM SWGR. BUS #3 TO P.B. #9.
* b. – DISCONNECT TEMPORARY & CONNECT FDR L-2 IN P.B. #9. (ENERGIZE)
c. – REMOVE TEMPORARY FDR L-2 BACK TO SWGR.

L-7 MOTOR CONTROL CENTER – MCC-W75L
a. – INSTALL L-7 CDT & WIRE FROM SWGR. BUS #4 TO MCC-W75L.
* b. – DISCONNECT EXIST. & CONNECT FDR L-7 AT MCC-W75L (ENERGIZE)
c. – REMOVE EXIST. FDR & CDT. L-7 BACK TO SWGR.

L-3-TEMP 208/120V. TRANSF. ELEC CLOS "W" 59-74th FLR'S.
a. – INSTALL L-3-TEMP CDT & WIRE FROM SWGR. BUS #4 TO 500KVA TRANSFORMER VIA P.B. #4.
* b. – DISCONNECT EXIST. & CONNECT FDR L-3-TEMP AT TRANSFORMER (ENERGIZE)
c. – REMOVE EXIST. FDR (L-3) BACK TO SWGR.

R-1-TEMP 208/120V. TRANSF. ELEC CLOS "W" 77-92nd FLR'S.
a. – INSTALL R-1-TEMP CDT & WIRE FROM SWGR. BUS #4 TO 500KVA TRANSFORMER VIA P.B. #4.
* b. – DISCONNECT EXIST. & CONNECT FDR R-1-TEMP AT TRANSFORMER (ENERGIZE)
c. – REMOVE EXIST. FDR (R-1) BACK TO SWGR.

L-4b 480/277V. ELEC CLOS "E" 59th TO 74th FLR'S
FUTURE RUN 59th THRU 66th FLR'S
a. – INSTALL BUSWAY L-4b FROM SWGR. BUS #3 TO END CAP & "T" TO EXIST BUSWAY L-4.
* b. – DISCONNECT EXISTING BUSWAY L-4 AND REMOVE BACK TO EXIST. SWGR.
* c. – INSTALL BUSWAY TRANSITION BOX ON EXIST. L-4 BUSWAY & CONNECT BUSWAY L-4b. (ENERGIZE)

L-4a 480/277V. ELEC CLOS "S" FUTURE 67th TO 74th FLR'S
a. – INSTALL BUSWAY L-4a FROM SWGR. BUS #4 TO END CAP.

R-16 EBASCO
a. – INSTALL R-16 CDT & WIRE FROM SWGR. BUS #4 TO P.B. #5.
* b. – DISCONNECT TEMPORARY & CONNECT FDR R-16 IN P.B. #5. (ENERGIZE)
c. – REMOVE TEMPORARY FDR R-16 BACK TO SWGR.

R-17 EBASCO
a. – INSTALL R-17 CDT & WIRE FROM SWGR. BUS #3 TO P.B. #5.
* b. – DISCONNECT TEMPORARY & CONNECT FDR R-17 IN P.B. #5. (ENERGIZE)
c. – REMOVE TEMPORARY FDR R-17 BACK TO SWGR.

3-3 FUJI BANK – SEE DWG. #E-5 STEP (A)
a. – INSTALL 3-3 CDT & WIRE FROM SWGR. BUS #3 TO P.B. #5.
* b. – DISCONNECT TEMPORARY & CONNECT FDR 3-3 IN P.B. #5. (ENERGIZE)
c. – REMOVE TEMPORARY FDR 3-3 BACK TO SWGR.

NOTE

1. – FOR LEGEND SEE DWG. #E-1, FOR GENERAL NOTES AND ABBREVIATIONS SEE DWG. #E-2.
2. – FOR NUMBER AND SIZE OF CONDUIT & WIRE SEE:
   • DWG. #E-70 – CONDUIT AND CABLE SCHEDULE
   • DWG. #E-99 – A.T.S. CONNECTION DIAGRAM
3. – SHUTTLE ELEVATORS #12, 14, 16, 18, 20, & 22 WILL BE WITHOUT POWER DURING THIS OUTAGE. SHUTTLE ELEVATORS #13, 15, 17, 19, 21 & 23 FED FROM SUBSTATION SS-75E WILL PROVIDE SERVICE TO THE 78TH FLOOR LOBBY.
4. – CONDUIT CABLE AND BUSWAY DESCRIBED IN SCHEDULE STAGE II STEP (I) SHALL BE INSTALLED PRIOR TO ENERGIZING BUS #3 & 4.
5. – ALL ELECTRICAL OUTAGES SHALL BE PERFORMED OUTSIDE NORMAL C..DING OPERATING HOURS. SEE SPECIFICATIONS DIVISION 1 ENTITLED "CONDITIONS AND PRECAUTIONS" FOR DESCRIPTION OF ELECTRICAL POWER OUTAGE CATEGORIES.

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. WTC-802.071 IN THE FORM IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.

DATE 6/21/95 Sunitam A. Nelson SPEC. WRITER
DATE 8/15/95 Peter R. Sweeney ENGINEER OF DESIGN

Sheet 161 of 224

THE PORT AUTHORITY OF NY & NJ

Peter R. Sweeney
ENGINEERING PROGRAM MANAGER WORLD TRADE CENTER

CHIEF ELECTRICAL ENGINEER

Engineering Department
Design Divisions

The World Trade Center Electrical/HVAC Upgrade Program

Title
TOWER ONE AND TWO LOW VOLTAGE SUBSTATIONS CONSTRUCTION AND INSTALLATION

ELECTRICAL

SUBSTATION SS-75W STAGE II LOAD TRANSFER SCHEDULE AND RISER DIAGRAM

No.	Date	Revision	Approved

This drawing subject to conditions in contract. All inventions, ideas, designs and methods herein are reserved to Port Authority and may not be used without its written consent.

Designed by	Drawn by	Checked by
LEAHY/FISCHER	LEAHY	A.S.

Date 5-1-95 Scale AS NOTED

Contract Number WTC 802.071 Drawing Number E-75

PA-SHT REV 5

FILE NAME: 802/1E75 JUN 12, 1995